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| APPLICATION NO.               | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------------|-------------|----------------------|---------------------|------------------|
| 10/800,709                    | 03/16/2004  | Kouzou Hirata        | 0951-0135PUS1       | 2095             |
| 2292                          | 7590        | 04/10/2006           | EXAMINER            |                  |
| BIRCH STEWART KOLASCH & BIRCH |             |                      | MULL, FRED H        |                  |
| PO BOX 747                    |             |                      | ART UNIT            |                  |
| FALLS CHURCH, VA 22040-0747   |             |                      | PAPER NUMBER        |                  |

3662

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/800,709 | <b>Applicant(s)</b><br>HIRATA, KOUZOU |  |
|                              | <b>Examiner</b><br>Fred H. Mull      | <b>Art Unit</b><br>3662               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments on p. 10, with respect to various objection(s), have been fully considered and are persuasive. The objections have been withdrawn.
2. Applicant's arguments on p. 10, with respect to the 35 USC 112 1<sup>st</sup> rejection(s) of claims 1 have been fully considered but they are not persuasive.

The rejection has not been sufficiently addressed. Applicant simply states that claim 1 has "been amended based on comments in the Office Action" (p. 10, 3<sup>rd</sup> ¶). The examiner is unclear as to what applicant is referring to. The content of the rejection does not appear to have been addressed.

3. Applicant's arguments on p. 10, with respect to the 35 USC 112 1<sup>st</sup> rejection(s) of claim 8 have been fully considered and are persuasive. The rejection(s) of these claims have been withdrawn.
4. Applicant's arguments on p. 10, with respect to the 35 USC 112 2<sup>nd</sup> rejection(s) of claim 2 have been fully considered and are persuasive. The rejection(s) of these claims have been withdrawn.
5. Applicant's arguments on p. 11-16, with respect to the prior art rejection(s) have been fully considered and are persuasive, based on the current language of the claims. The rejection(s) of these claims have been withdrawn.
6. The examiner notes that the previously cited references may be relevant to potentially reworked claims that are consistent with the Doppler effect (see below).

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1-20 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility.

Applicant contends his invention “inhibits the effect of Doppler shifting when a mobile body receives OFDM broadcast(s).” (¶30, specification). Applicant’s solution is based on the belief that the Doppler shift depends on “the relationship between the direction of the propagating wave and the orientation of the receiving antenna” (¶13). However, the equation for the Doppler effect for electromagnetic radiation (see, for example, Otten, section “Optical Doppler effect”, p. 2-3) shows that the Doppler effect is a function of the relative speed and direction of movement of the transmitter and receiver, and not dependent on the direction of the propagating wave, or the speed of the receiver alone. As such, applicant’s invention is based on an incorrect understanding of the Doppler effect, and is inoperative.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which

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was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant contends his invention "inhibits the effect of Doppler shifting when a mobile body receives OFDM broadcast(s)." (¶30, specification). Applicant's solution is based on the belief that the Doppler shift depends on "the relationship between the direction of the propagating wave and the orientation of the receiving antenna" (¶13). However, the equation for the Doppler effect for electromagnetic radiation (see, for example, Otten, section "Optical Doppler effect", p. 2-3) shows that the Doppler effect is a function of the relative speed and direction of movement of the transmitter and receiver, and not dependent on the direction of the propagating wave, or the speed of the receiver alone. As such, applicant's invention is based on an incorrect understanding of the Doppler effect, and one of ordinary skill in the art would not be able to use the invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred H. Mull whose telephone number is 571-272-6975. The examiner can normally be reached on Monday through Friday from approximately 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H. Tarcza can be reached on 571-272-6979. The fax phone


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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fred H. Mull  
Examiner  
Art Unit 3662

fhm

  
THOMAS H. TARCZA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600